Section D Page 19 Facility I.D.#: 7417 Revision #: Draft

Date: May 15, 2009

# FACILITY PERMIT TO OPERATE EASTERN MUNICIPAL WATER DIST.

### PERMIT TO OPERATE

Permit No. A/N 466470

#### **Equipment Description:**

STORAGE TANK, NO.1, LIQUEFIED PROPANE GAS, 9'-0" D. X 41-6" L., PRESSURIZED, 18,328 GALLONS (76.600 POUNDS) CAPACITY, WITH PRESSURE RELIEF VALVE.

- 1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.

  [RULE 204]
- 2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.

  [RULE 204]
- 3. THIS EQUIPMENT SHALL BE USED ONLY TO STORE LIQUEFIED PROPANE GAS. [RULE 204]
- 4. THE OPERATOR SHALL FILL THE TANK ONLY WITH A CLOSED SYSTEM WHICH DOES NOT VENT VAPORIZED GAS INTO THE ATMOSPHERE [RULE 204
- 5. THE OPERATOR SHALL INSTALL AND MAINTAIN PRESSURE RELIEF VALVE WHICH IS SET AT A MINIMUM PRESSURE OF 250 PSIG.
  [RULE 204]
- 6. THE OPERATOR SHALL FILL THE TANK AT A FLOW RATE AND TEMPERATURE WHICH DOES NOT CAUSE THE PRESSURE INSIDE THE STORAGE TANK TO EXCEED 250 PSIG.

  [RULE 204]
- 7. THE OPERATOR SHALL INSTALL AND MAINTAIN A PRESSURE GAGE TO MONITOR THE PRESSURE INSIDE THE STORAGE TANK
  [RULE 204]

Section D Page 20 Facility I.D.#: 7417 Revision #: Draft

Date: May 15, 2009

# FACILITY PERMIT TO OPERATE EASTERN MUNICIPAL WATER DIST.

- 8. ONCE PER MONTH, AND AFTER EACH TANK FILLING OPERATION, THE OPERATOR SHALL MEASURE AND RECORD THE PRESSURE OF THE STORAGE TANK [RULE 204]
- 9. THE OPERATOR SHALL NOT FILL THIS STORAGE TANK MORE THAN ONCE PER CALENDAR MONTH.

  [RULE 1304 OFFSET]
- 10. RECORDS SHALL BE MAINTAINED AND RETAINED FOR A PERIOD NOT LESS THAN FIVE YEARS, AND INCLUDE THE TEMPERATURE AND PRESSURE INSIDE THE STORAGE TANK, QUANTITY OF THE MOST RECENT FILLING OF THE STORAGE TANK, AND THE DATE OF THE DELIVERY OF THE LPG
  [RULE 204]

### **Emissions and Requirements:**

11. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

VOC: RULE 442

Section D Page 21 Facility I.D.#: 7417 Revision #: Draft Date: May 15, 2009

## FACILITY PERMIT TO OPERATE EASTERN MUNICIPAL WATER DIST.

### PERMIT TO OPERATE

Permit No. A/N 466471

#### **Equipment Description:**

STORAGE TANK, NO.2, LIQUEFIED PROPANE GAS, 6'-0" D. X 52-7"L., PRESSURIZED, 10,677 GALLONS (44,630 POUNDS) CAPACITY, WITH PRESSURE RELIEF VALVE

- 1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.

  [RULE 204]
- 2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.

  [RULE 204]
- 3. THIS EQUIPMENT SHALL BE USED ONLY TO STORE LIQUEFIED PROPANE GAS. [RULE 204]
- 4. THE OPERATOR SHALL FILL THE TANK ONLY WITH A CLOSED SYSTEM WHICH DOES NOT VENT VAPORIZED GAS INTO THE ATMOSPHERE [RULE 204
- 5. THE OPERATOR SHALL INSTALL AND MAINTAIN PRESSURE RELIEF VALVE WHICH IS SET AT A MINIMUM PRESSURE OF 250 PSIG.
  [RULE 204]
- 6. THE OPERATOR SHALL FILL THE TANK AT A FLOW RATE AND TEMPERATURE WHICH DOES NOT CAUSE THE PRESSURE INSIDE THE STORAGE TANK TO EXCEED 250 PSIG.
  [RULE 204]
- 7. THE OPERATOR SHALL INSTALL AND MAINTAIN A PRESSURE GAGE TO MONITOR THE PRESSURE INSIDE THE STORAGE TANK
  [RULE 204]

Section D Page 22 Facility I.D.#: 7417 Revision #: Draft Date: May 15, 2009

# FACILITY PERMIT TO OPERATE EASTERN MUNICIPAL WATER DIST.

- 8. ONCE PER MONTH AND AFTER EACH TANK FILLING OPERATION, THE OPERATOR SHALL MEASURE AND RECORD THE TEMPERATURE AND PRESSURE OF THE STORAGE TANK [RULE 204]
- 9. THE OPERATOR SHALL NOT FILL THIS STORAGE TANK MORE THAN ONCE PER CALENDAR MONTH.
  [RULE 1304 OFFSET]
- 10. RECORDS SHALL BE MAINTAINED AND RETAINED FOR A PERIOD NOT LESS THAN FIVE YEARS, AND INCLUDE THE TEMPERATURE AND PRESSURE INSIDE THE STORAGE TANK, QUANTITY OF THE MOST RECENT FILLING OF THE STORAGE TANK, AND THE DATE OF THE DELIVERY OF THE LPG
  [RULE 204]

### **Emissions and Requirements:**

11. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

VOC: RULE 442

Section D Page 23 Facility 1.D.#: 7417 Revision #: Draft Date: May 15, 2009

# FACILITY PERMIT TO OPERATE EASTERN MUNICIPAL WATER DIST.

### PERMIT TO OPERATE

Permit No.	
A/N 485927	

### **Equipment Description:**

INTERNAL COMBUSTION ENGINE, NO. 1, CATERPILLAR, MODEL G342 NA HCR, NATURALLY ASPIRATED, SIX CYLINDERS, FOUR CYCLE, 225 BHP, NATURAL GAS FUELED WITH LIQUID PROPANE GAS (LPG) AS BACK-UP FUEL, SINGLE EXHAUST WITH A HOUSTON INDUSTRIAL SILENCING CATALYTIC CONVERTER/MUFFLER, MODEL DN/S-2605H, DRIVING AN AERATION BLOWER, AND AN AIR-TO-FUEL RATIO CONTROLLER, ALTRONIC, MODEL NO. EPC-100

- 1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.

  [RULE 204]
- 2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.

  [RULE 204]
- 3. THE CATALYST IN THE CONVERTER SHALL BE MAINTAINED IN GOOD WORKING CONDITION. THE OPERATOR SHALL MAINTAIN RECORDS OF CATALYST CLEANING PERIODS AND REPLACEMENT FREQUENCY.

  [RULE 3004(a)(4)]
- 4. A MANOMETER SHALL BE INSTALLED TO MEASURE THE PRESSURE DROP ACROSS THE CATALYST. THE PRESSURE DROP SHALL NOT EXCEED 16 INCHES OF WATER COLUMN (W.C.). [RULE1303]
- 5. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH RULE 1110.2. [RULE 1110.2]
- 6. THIS ENGINE SHALL USE LPG FUEL ONLY DURING NATURAL GAS CURTAILMENT OR DURING PERIODS OF TESTING NOT TO EXCEED 24 HOURS PER YEAR.

  [RULE 1303]

Section D Page 24 Facility I.D.#: 7417 Revision #: Draft

Date: May 15, 2009

## FACILITY PERMIT TO OPERATE EASTERN MUNICIPAL WATER DIST.

#### Periodic Monitoring:

- THIS ENGINE SHALL NOT BE OPERATED WITHOUT THE USE OF AN AUTOMATIC AIR TO FUEL 7. RATIO CONTROLLER WHICH SHALL BE MAINTAINED AND KEPT IN PROPER OPERATING CONDITIONS AT ALL TIMES AS SPECIFIED BY THE MANUFACTURER. [RULE 1303(a)(1)-BACT, RULE 3004(a)(4)]
- THE OXYGEN CONCENTRATION AT THE OUTLET OF THE ENGINE SHALL NOT EXCEED 0.5 8. PERCENT OXYGEN. [RULE 1303(a)(1)-BACT, RULE 3004(a)(4)]
- THIS ENGINE SHALL BE EQUIPPED WITH AN OXYGEN SENSOR AT THE EXHAUST OF THE 9. ENGINE. A RECORDING SYSTEM SHALL BE INSTALLED TO VERIFY COMPLIANCE WITH CONDITION 8. PARAMETRIC OPERATING DATA MAY BE USED IN LIEU OF DIRECT OXYGEN MEASUREMENTS, BUT RECORDS OF HOW THE PARAMETRIC DATA RELATES TO OXYGEN CONTENT MUST BE RETAINED AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REOUEST. [RULE 1303(a)(1)-BACT, RULE 3004(a)(4)]
- THE OPERATOR SHALL INSTALL AND MAINTAIN A TEMPERATURE GAUGE AND RECORDING 10. SYSTEM TO INDICATE ACCURATELY THE TEMPERATURE AT THE INLET OF THE CATALYST. [RULE 1303(a)(1)-BACT, RULE 3004(a)(4)]
- THE OPERATOR SHALL INSTALL AND MAINTAIN A TEMPERATURE GAUGE AND RECORDING 11. SYSTEM TO INDICATE ACCURATELY THE TEMPERATURE AT THE OUTLET OF THE CATALYST. [RULE 1303(a)(1)-BACT, RULE 3004(a)(4)]
- THE TEMPERATURE AT THE OUTLET OF THE CATALYST SHALL NOT EXCEED 1300 DEGREES 12. FAHRENHEIT. [RULE 1303(a)(1)-BACT, RULE 3004(a)(4)]
- THE MINIMUM TEMPERATURE AT THE INLET OF THE CATALYST SHALL BE ABOVE 650 13. DEGREES FAHRENHEIT, EXCEPT DURING AN ENGINE COLD START NOT TO EXCEED 30 MINUTES. [RULE 1303 (a)-BACT]
- 14. THE ENGINE SHALL OPERATE BETWEEN 1044 AND 1276 RPM, EXCEPT DURING START-UP OR SHUT-DOWN OPERATION WHICH DOES NOT EXCEED 30 MINUTES PER EVENT. [RULE 1110.2]

#### **Emissions and Requirements:**

THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS

NOX: 36 PPMV, RULE 1110.2 VOC: 250 PPMV, RULE 1110,2 2000 PPMV, RULE 1110.2

Section D Page 25 Facility I.D.#: 7417 Revision #: Draft

Date: May 15, 2009

## FACILITY PERMIT TO OPERATE EASTERN MUNICIPAL WATER DIST.

#### PERMIT TO OPERATE

Permit No. A/N 485931

#### **Equipment Description:**

INTERNAL COMBUSTION ENGINE, NO. 2, CATERPILLAR, MODEL G342 NA HCR, NATURALLY ASPIRATED, SIX CYLINDERS, FOUR CYCLE, 225 BHP, NATURAL GAS FUELED WITH LIQUID PROPANE GAS (LPG) AS BACK-UP FUEL. SINGLE EXHAUST WITH A HOUSTON INDUSTRIAL SILENCING CATALYTIC CONVERTER/MUFFLER, MODEL DN/S-2605H, DRIVING AN AERATION BLOWER AND AN AIR-TO-FUEL RATIO CONTROLLER, ALTRONIC, MODEL NO. EPC-100.

- 1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW. [RULE 204]
- 2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES. [RULE 204]
- THE CATALYST IN THE CONVERTER SHALL BE MAINTAINED IN GOOD WORKING CONDITION. 3. THE OPERATOR SHALL MAINTAIN RECORDS OF CATALYST CLEANING PERIODS AND REPLACEMENT FREQUENCY. [RULE 3004(a)(4)]
- A MANOMETER SHALL BE INSTALLED TO MEASURE THE PRESSURE DROP ACROSS THE 4. CATALYST. THE PRESSURE DROP SHALL NOT EXCEED 16 INCHES OF WATER COLUMN (W.C.). [RULE1303]
- THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH RULE 1110.2. 5. [RULE 1110.2]
- THIS ENGINE SHALL USE LPG FUEL ONLY DURING NATURAL GAS CURTAILMENT OR DURING 6. PERIODS OF TESTING NOT TO EXCEED 24 HOURS PER YEAR. [RULE 1303]

# FACILITY PERMIT TO OPERATE EASTERN MUNICIPAL WATER DIST.

#### Periodic Monitoring:

- 7. THIS ENGINE SHALL NOT BE OPERATED WITHOUT THE USE OF AN AUTOMATIC AIR TO FUEL RATIO CONTROLLER WHICH SHALL BE MAINTAINED AND KEPT IN PROPER OPERATING CONDITIONS AT ALL TIMES AS SPECIFIED BY THE MANUFACTURER.

  [RULE 1303(a)(1)-BACT, RULE 3004(a)(4)]
- 8. THE OXYGEN CONCENTRATION AT THE OUTLET OF THE ENGINE SHALL NOT EXCEED 0.5 PERCENT OXYGEN.
  [RULE 1303(a)(1)-BACT, RULE 3004(a)(4)]
- 9. THIS ENGINE SHALL BE EQUIPPED WITH AN OXYGEN SENSOR AT THE EXHAUST OF THE ENGINE. A RECORDING SYSTEM SHALL BE INSTALLED TO VERIFY COMPLIANCE WITH CONDITION 8. PARAMETRIC OPERATING DATA MAY BE USED IN LIEU OF DIRECT OXYGEN MEASUREMENTS, BUT RECORDS OF HOW THE PARAMETRIC DATA RELATES TO OXYGEN CONTENT MUST BE RETAINED AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.

  [RULE 1303(a)(1)-BACT, RULE 3004(a)(4)]
- 10. THE OPERATOR SHALL INSTALL AND MAINTAIN A TEMPERATURE GAUGE AND RECORDING SYSTEM TO INDICATE ACCURATELY THE TEMPERATURE AT THE INLET OF THE CATALYST. [RULE 1303(a)(1)-BACT, RULE 3004(a)(4)]
- 11. THE OPERATOR SHALL INSTALL AND MAINTAIN A TEMPERATURE GAUGE AND RECORDING SYSTEM TO INDICATE ACCURATELY THE TEMPERATURE AT THE OUTLET OF THE CATALYST. [RULE 1303(a)(1)-BACT, RULE 3004(a)(4)]
- 12. THE TEMPERATURE AT THE OUTLET OF THE CATALYST SHALL NOT EXCEED 1300 DEGREES FAHRENHEIT.

  [RULE 1303(a)(1)-BACT, RULE 3004(a)(4)]
- 13. THE MINIMUM TEMPERATURE AT THE INLET OF THE CATALYST SHALL BE ABOVE 650 DEGREES FAHRENHEIT, EXCEPT DURING AN ENGINE COLD START NOT TO EXCEED 30 MINUTES.
  [RULE 1303 (a)-BACT]
- 14. THE ENGINE SHALL OPERATE BETWEEN 1044 AND 1276 RPM, EXCEPT DURING START-UP OR SHUT-DOWN OPERATION WHICH DOES NOT EXCEED 30 MINUTES PER EVENT.

  [RULE 1110.2]

#### **Emissions and Requirements:**

THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

PM: RULE 404. SEE APPENDIX B FOR EMISSION LIMITS

NOX: 36 PPMV, RULE 1110.2 VOC: 250 PPMV, RULE 1110.2 CO: 2000 PPMV, RULE 1110.2

Section D Page 27 Facility I.D.#: 7417 Revision #: Draft

Date: May 15, 2009

### FACILITY PERMIT TO OPERATE EASTERN MUNICIPAL WATER DIST.

### PERMIT TO OPERATE

Permit No. A/N 485932

#### **Equipment Description:**

INTERNAL COMBUSTION ENGINE, NO. 3, CATERPILLAR, MODEL G342 NA HCR, NATURALLY ASPIRATED, SIX CYLINDERS, FOUR CYCLE, 225 BHP, NATURAL GAS FUELED WITH LIQUID PROPANE GAS (LPG) AS BACK-UP FUEL, SINGLE EXHAUST WITH A HOUSTON INDUSTRIAL SILENCING CATALYTIC CONVERTER/MUFFLER, MODEL DN/S-2605H, DRIVING AN AERATION BLOWER AND AN AIR-TO-FUEL RATIO CONTROLLER, GILL INSTRUMENTS, MODEL NO. AF120.

#### **Conditions:**

- OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA 1. AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW. [RULE 204]
- THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING 2. CONDITION AT ALL TIMES. [RULE 204]
- THE CATALYST IN THE CONVERTER SHALL BE MAINTAINED IN GOOD WORKING CONDITION. THE OPERATOR SHALL MAINTAIN RECORDS OF CATALYST CLEANING PERIODS AND REPLACEMENT FREQUENCY. [RULE 3004(a)(4)]
- A MANOMETER SHALL BE INSTALLED TO MEASURE THE PRESSURE DROP ACROSS THE 4. CATALYST. THE PRESSURE DROP SHALL NOT EXCEED 16 INCHES OF WATER COLUMN (W.C.). [RULE1303]
- THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH RULE 1110.2. 5. **IRULE 1110.21**
- 6. THIS ENGINE SHALL USE LPG FUEL ONLY DURING NATURAL GAS CURTAILMENT OR DURING PERIODS OF TESTING NOT TO EXCEED 24 HOURS PER YEAR. [RULE 1303]

#### Periodic Monitoring:

7. THIS ENGINE SHALL NOT BE OPERATED WITHOUT THE USE OF AN AUTOMATIC AIR TO FUEL RATIO CONTROLLER WHICH SHALL BE MAINTAINED AND KEPT IN PROPER OPERATING CONDITIONS AT ALL TIMES AS SPECIFIED BY THE MANUFACTURER. [RULE 1303(a)(1)-BACT, RULE 3004(a)(4)]

## FACILITY PERMIT TO OPERATE EASTERN MUNICIPAL WATER DIST.

- 8. THE OXYGEN CONCENTRATION AT THE OUTLET OF THE ENGINE SHALL NOT EXCEED 0.5 PERCENT OXYGEN.
  [RULE 1303(a)(1)-BACT, RULE 3004(a)(4)]
- 9. THIS ENGINE SHALL BE EQUIPPED WITH AN OXYGEN SENSOR AT THE EXHAUST OF THE ENGINE. A RECORDING SYSTEM SHALL BE INSTALLED TO VERIFY COMPLIANCE WITH CONDITION 8. PARAMETRIC OPERATING DATA MAY BE USED IN LIEU OF DIRECT OXYGEN MEASUREMENTS, BUT RECORDS OF HOW THE PARAMETRIC DATA RELATES TO OXYGEN CONTENT MUST BE RETAINED AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.

  [RULE 1303(a)(1)-BACT, RULE 3004(a)(4)]
- 10. THE OPERATOR SHALL INSTALL AND MAINTAIN A TEMPERATURE GAUGE AND RECORDING SYSTEM TO INDICATE ACCURATELY THE TEMPERATURE AT THE INLET OF THE CATALYST. [RULE 1303(a)(1)-BACT, RULE 3004(a)(4)]
- 11. THE OPERATOR SHALL INSTALL AND MAINTAIN A TEMPERATURE GAUGE AND RECORDING SYSTEM TO INDICATE ACCURATELY THE TEMPERATURE AT THE OUTLET OF THE CATALYST. [RULE 1303(a)(1)-BACT, RULE 3004(a)(4)]
- 12. THE TEMPERATURE AT THE OUTLET OF THE CATALYST SHALL NOT EXCEED 1300 DEGREES FAHRENHEIT.
  [RULE 1303(a)(1)-BACT, RULE 3004(a)(4)]
- 13. THE MINIMUM TEMPERATURE AT THE INLET OF THE CATALYST SHALL BE ABOVE 650 DEGREES FAHRENHEIT, EXCEPT DURING AN ENGINE COLD START NOT TO EXCEED 30 MINUTES.

  [RULE 1303 (a)-BACT]
- 14. THE ENGINE SHALL OPERATE BETWEEN 1044 AND 1276 RPM, EXCEPT DURING START-UP OR SHUT-DOWN OPERATION WHICH DOES NOT EXCEED 30 MINUTES PER EVENT.

  [RULE 1110.2]

#### **Emissions and Requirements:**

THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS

NOx: 36 PPMV, RULE 1110.2

NOx: 1.5 gram/BHP-Hr, RULE 1303-BACT

VOC: 250 PPMV, RULE 1110.2

VOC: 1.0 gram/BHP-Hr, RULE 1303-BACT

CO: 2000 PPMV, RULE 1110.2

CO: 1.5 gram/BHP-Hr, RULE 1303-BACT